

CLAIMS

WHAT IS CLAIMED IS:

1. A refrigerating apparatus in which a refrigerant circuit (1E) which performs a
5 vapor compression refrigerating cycle is provided with an oil return passageway (21)
through which refrigerating machine oil separated on the discharge side of compressors
(2A, 2B) is injected into the suction side of said compressors (2A, 2B), comprising:

a liquid injection passageway (15) through which liquid refrigerant is injected into
the suction side of said compressors (2A, 2B),

10 wherein said oil return passageway (21) is connected to said liquid injection
passageway (15).

2. A refrigerating apparatus in which a refrigerant circuit (1E) which performs a
vapor compression refrigerating cycle is provided with a gas injection passageway (37)
through which gas refrigerant is injected into the suction side of compressors (2A, 2B),
15 comprising:

a liquid injection passageway (15) through which liquid refrigerant is injected into
the suction side of said compressors (2A, 2B),

wherein said gas injection passageway (37) is connected to said liquid injection
passageway (15).

20 3. The refrigerating apparatus of either claim 1 or claim 2, comprising:

a heat source side unit (1A) and utilization side units (1B, 1C, 1D), said units (1A,
1B, 1C, 1D) being connected with one another,

wherein the degree of superheat of suction refrigerant of said compressors (2A, 2B)
is controlled by adjusting the rate of flow of refrigerant flowing through said liquid
25 injection passageway (15) without operating expansion mechanisms (42, 52) provided in
said utilization side units (1B, 1C, 1D).

4. The refrigerating apparatus of claim 3,
wherein said compressors (2A, 2B) are variable displacement compressors,
wherein said liquid injection passageway (15) is opened whenever the operating
capacity of said compressors (2A, 2B) exceeds a predetermined value.

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